

Abortion Relation Factors among Women in Ardabil: A Case-Control Study

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Abstract: Approximately 210 million pregnancies occur in world annually, which 38% of them are unplanned and 22% are aborted. About 80,000 abortion occurs each year in Iran. The main aim of this study, was determining abortion relation factors among women in Ardabil, Iran. This study is a case-control study, 200 mothers which had abortion selected randomly and 200 mothers which had delivered a term infant matched (age) with them for control group. Data were collected by interview and questionnaire and results compared together via chi square and t-test. This study showed significant relationship between abortion and history of previous abortions and pregnancies ($p < 0.05$). Because main reason of abortion was unwanted pregnancy, contraceptive education and counseling should be considered as priorities of health program.

Key words: Abortion, unwanted pregnancy, contraception, relation factors, women

INTRODUCTION

Holy Quran says; Do not kill your children on a plea of poverty. We provide substance for you and them (chapter 17 verse 31). Interruption of pregnancy or expulsion of the product of conception before the fetus is viable or before 20 weeks is called abortion.

Abortion divided into two groups:

- Spontaneous
- Induced

Spontaneous abortions may result from certain viruses-most notably cytomegalovirus, herpes virus, parvovirus and rubella virus-or from disorders that can cause sporadic or recurrent abortions (e.g., chromosomal or Mendelian abnormalities and luteal phase defects). Acquired and hereditary Thrombophlebitis appear to cause abortions after = 10 week. Immunologic abnormalities and major trauma may be another cause. On the other hand, sub clinical thyroid disorders, well controlled or sub clinical diabetes mellitus, extroverted uterus and minor trauma has not been shown to cause spontaneous abortions.

Spontaneous abortion in assisted reproductive technology pregnancies is higher than general population and studies show that the overall risk in the first trimester of these gestations was 16.5% in the

assisted reproductive technology cohort versus 14.0% in the Ford cohort (Jim *et al.*, 2004).

An estimated 42 million abortions were induced in 2003, compared with 46 million in 1995. The induced abortion rate in 2003 was 29 per 1000 women aged 15-44 years, down from 35 in 1995. Abortion rates were lowest in Western Europe (12 per 1000 women). Rates were 17 per 1000 women in northern Europe, 18 per 1000 women in southern Europe and 21 per 1000 women in northern America (Lawrence and Stanley, 2003).

The abortion level in Russia has been exceptionally high for several decades, yet during the last ten years, it experienced a considerable decline (Philippov *et al.*, 1998).

In 2003, 48% of all abortions in worldwide were unsafe and more than 97% of all unsafe abortions were in developing countries. There were 31 abortions for every 100 live births worldwide in 2003 and this ratio was highest in Eastern Europe (105 for every 100 live births). (Sedgh *et al.*, 2007).

The last assessment of abortion levels in countries where legal abortion is generally available was conducted nearly a decade ago. According to that study, up to the mid-1990s, legal abortion rates had been falling in many parts of the world, either as contraceptive usage was increasing or as contraceptives were being used more effectively. The investigators speculated that although the legalization of abortion may initially result in an increase in the number of reported abortions in countries, abortion rates would eventually decline as access to

family planning education and contraceptive services increases. Updated information on abortion incidence is required to assess recent trends and current patterns in induced abortion across countries and regions and in different age groups (Sedgh *et al.*, 2007).

The overall abortion rate in Asia (33 per 1000) is similar to that in Latin America. The rates in South-central Asia (28) and Western Asia (32) are somewhat lower than those in Eastern (36) and Southeastern Asia (40). All the countries of Eastern Asia permit abortions and virtually all abortions are legal. The data for South-central and South-eastern Asia include both legal and illegal abortions, since the procedure is generally permitted in Singapore, Vietnam, India and the former Soviet Asian states but was legally restricted elsewhere in 1995. In Western Asia, the legal abortions in our statistics took place in Turkey and Israel (Stanley *et al.*, 1999).

MATERIALS AND METHODS

This study was a case control study that has been done to determine abortion relation factors in Ardabil, Iran. Women who been referred to childbirth section in Ardabil city hospitals have been formed the population of study. Two groups consist 200 cases who had abortion and 200 control who had delivered a term infant, with OR = 2, power 80% and significance level of 5% were selected as sample. Data about predisposing factors of abortion were collected using questionnaires. The age of case and control group was matched and the results compared with together. The content validity of questionnaire was estimated by experts. For determination of reliability test retest used and the resulted value was 91%.

RESULTS

The age of mothers were more than 15 years old (Table 1). Most of them (52.5% in case and 41% in control group) had primary education (49.3% in case and 40.8% in control group) and were housekeeper. As well, most of their husbands had primary education and had private jobs. Most of case group (70%) were urban resident. Thirty-five percent of mothers in case and 28.1% in control group have menarche history. 44.6% of mothers in case group and 38.6% in control group have familial marriage. 4.8% of mothers in case group have history of effective drug use. 3.6% of mothers in case group and 2.4% in control group have history of exposure to trauma. The age of marriage of mothers in case group were 19-24 (45%) and in control group were in 13-18 (53.8%). 31.9% of partners had history of cigarette use (57.1% in case and

Table 1: The age range in two groups

Age group	Case	Control
15-23	52	66
24-32	107	109
More than 34	41	25
Total	200	200

DF = 2, $\chi^2 = 5.52$

Table 2: Type of pregnancy

Type of pregnancy group	Case	Control
Planned	40	190
Unwanted	160	10
Total	200	200

C1 013/0 = OR 0001/0 = DF = 1, χ^2_{2227}

42.8% in control group). Eighty percent of mothers in case and 16.5% in control group had one or more abortion. 64.9% of mothers in case group and 77.5% in control group had 2-5 previous pregnancy. Eighty percent of mothers in case group and 5% in control group had unwanted pregnancy that their difference was significant statistically (Table 2).

DISCUSSION

Result of this study showed that there were significant relationship between abortion and unwanted pregnancy ($p < 0.01$). High levels of unwanted fertility are reflection of women's inability to use satisfactory control over reproductive lives.

Some studies show that women with all socioeconomic and demographic characteristics do illegal abortion when faced with unplanned pregnancy. In general, abortion rate are highest in societies where small families are desired and contraceptive use is weak (Bariragi, 2001).

Bangarts and westoff reports, which published in the September 2000 issue of the population council's journal studies in family planning, showed that modest increase in effective contraceptive use could reduce abortion rates. They describe that there were relationship between a range of factors such as the number of reproductive years per woman, desired family size, abortion probability, contraceptive use and the it's effectiveness with rate of abortion (News from the Population Council, 2001). These results were similar to these findings.

Economic and cultural problems were the main reason of limiting the number of children in motivated couples. For this reason, the demand for contraception will be great: in absence of this or even in its failure, demand for abortion will be increase.

Islam is the religion of strong family relationship and leaves the door open for birth control. Islam considers life as a sacred gift from Almighty God. No one is allowed to take or stop the life of anyone else except by way of

Justice or according to the Islamic law. Thus, the holy Quran says: Do not kill your children on a plea of poverty, we provide sustenance for you and for them (chapter, 6 verse 151).

In another verse, says: Do not kill your children for fear of poverty, it is we, who provide sustenance for them as well as for you, for verily killing them is a great sin (chapter 17 verse 31).

Therefore, it is great sin to take the life of children unless it cause problem to mother.

In countries around the world, women who want to limit their family will use all available methods to do so, if contraception is not a viable option, they will turn to abortion even if it is illegal or sin. Extensive evidence demonstrates, however, that when modern contraceptives are made available to women their increased use over time replaces previous reliance on abortion and becomes the major factor associated with reduced abortion rates (Special Analysis, 2003). Therefore, policy makers seeking to reduce the rate of abortion would do well to address its root cause-unintended pregnancy-by facilitating widespread access to modern contraceptive and by promoting knowledge of woman about effective use, because this study showed that rate of abortion in Iran belongs to women with low education and homemakers. This study showed that most of women in Iran need to education and counseling about effective use of contraceptive.

A comparative study between Swedish and immigrant women (2003) showed that immigrant status seems to be an independent risk factor for induced abortion. In that study low education, weak social network, poverty and unemployment are the most common probable cause of induced abortion in immigrant women (Helstroml *et al.*, 2003).

At the end, Primary prevention of unintended pregnancy is optimal goal (Bartlett *et al.*, 2004).

CONCLUSION

In this study, the most important cause of abortion was unwanted pregnancy. So in this regard, planning and

consultation should be considered the most important priority of health program.

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